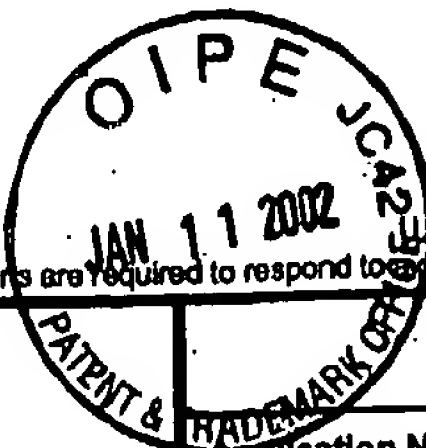


Please type a plus sign (+) inside this box →



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



PTO/SB/08A (8-00) (Modified)
Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent & Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Sheet	1	of	2	Application Number	09/905,593
				Filing Date	July 13, 2001
				First Named Inventor	Lynn E. VANATTA
				Group Art Unit	To Be Assigned
				Examiner Name	To Be Assigned
				Attorney Docket Number	25185-P001US

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of cited document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind code ² (if known)			

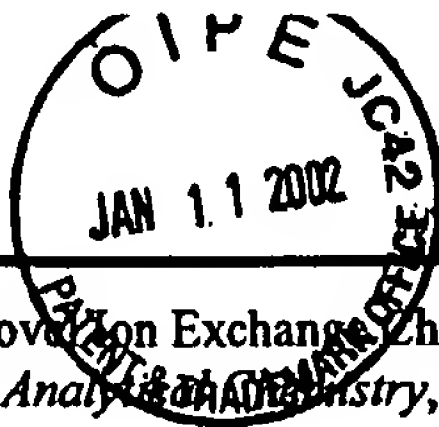
FOREIGN PATENT DOCUMENTS


Examiner Initials	Cite No. ¹	U.S. Patent Document			Name of Patentee or Applicant of cited document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ³
		Office ³	Number ⁴	Kind code ⁵ (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

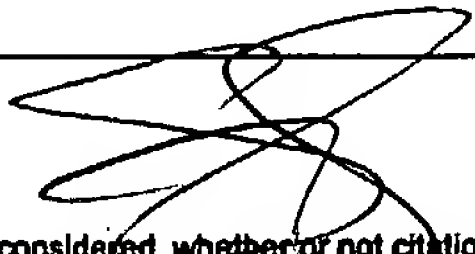
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), Publisher, city, and/or country where published.	T ²
	1	Weise, Wendy, "News Release - New Brochure Describes the Finnigan LCQ DUO Ion Trap Mass Spectrometer", http://www.thermoquest.com/pressroom/PR70.html , Thermo Quest Corporation, December 11, 2000.	
	2	Dionex/Summit/AQA HPLCMS Product Introduction; "Introducing the New Summit/AQA HPLC/MS; http://www.dionex.com/app/tree.taf?asset_id=68895 , December 11, 2000.	
	3	DIONEX, "The Use of Concentrator Columns in Ion Chromatography"; <i>Technical Note 8</i> , pp. 1-8, 1994	
	4	DIONEX, "Determination of Trace Anions in Concentrated Hydrofluoric Acid"; <i>Technical Note 45</i> , pp. 1-11, 1999	
	5	DIONEX, ; "Determination of Trace Anions in Concentrated Glycolic Acid", <i>Technical Note 46</i> , pp. 1-11 1999	
	6	DIONEX, "Determination of Trace Anions in Concentrated Hydrofluoric Acid", <i>Application Note 78</i> , 1994	
	7	DIONEX, "Determination of Trace Anions in Concentrated Bases Using AutoNeutralization Pretreatment/Ion Chromatography" <i>Application Note 93</i> , August, 1994	
	8	DIONEX, "Determination of Trace Cations in Concentrated Acids Using AutoNeutralization Pretreatment/Ion Chromatography", <i>Application Note 94</i> , August, 1994.	

COPY OF PAPERS
ORIGINALLY FILED



	9	SMALL, Hamish, et al., "Novel Ion Exchange Chromatographic Method Using Conductimetric Detection", <i>Analytical Chemistry</i> , Vol. 47, No. 11, pp. 1801-1809, September 1975	

Examiner
Signature



Date
Considered

3/18/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent & Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

HOUSTON_1512182M
09/05/2001 - 25185-P001US



Please type a plus sign (+) inside this box →



PTO/SB/08A (8-00) (Modified)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent & Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Sheet

1

of

1

Application Number

09/905,593

Filing Date

July 13, 2001

First Named Inventor

Lynn E. VANATTA

Group Art Unit

2812

Examiner Name

To Be Assigned

Attorney Docket Number

25185-P001US

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of cited document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind code ² (if known)			
8		6,245,227		Moon et al.	06/12/2001	
		6,236,042		Kato et al.	05/22/2001	
		Re. 36,892		Apffel, Jr. et al.	10/03/2000	
		6,106,710		Fischer et al.	08/22/2000	
		6,100,522		Chiang	08/08/2000	
		5,859,432		Kato et al.	01/12/1999	
		5,789,746		Kato et al.	08/04/1998	
		5,581,081		Kato et al.	12/03/1996	
		5,468,452		Hagiwara	11/21/1995	
		5,447,553		Apffel, Jr. et al.	09/05/1995	
		5,368,727		Takahashi et al.	11/29/1994	
		5,331,160		Whitt	07/19/1994	
		5,331,159		Apffel, Jr. et al.	07/19/1994	
		Des. 347,396		Ohnuma et al.	05/31/1994	
		5,285,064		Willoughby	02/08/1994	
		5,266,192		Ligon et al.	11/30/1993	
		5,240,616		Kato et al.	08/31/1993	
		5,223,131		Apffel, Jr. et al.	06/29/1993	
		5,117,109		Asakawa et al.	05/26/1992	
		4,982,097		Slivon et al.	01/01/1991	
		4,980,057		Dorn et al.	12/25/1990	
		4,968,885		Willoughby	11/06/1990	
		4,867,947		Andresen et al.	09/19/1989	
		4,863,491		Brandt et al.	09/05/1989	
		4,851,700		Goodley	07/25/1989	
		4,570,068		Sakairi et al.	02/11/1986	
		4,281,246		White, V et al.	07/28/1981	
		4,160,161		Horton	07/03/1979	
		4,112,297		Miyagi et al.	09/05/1978	
		4,055,987		McFadden	11/01/1977	
		3,997,298		McLafferty et al.	12/14/1976	
		3,626,178		Cohen	12/07/1971	
		6,325,976		Small et al.	12/04/2001	
		6,077,434		Srinivasan et al.	06/20/2000	
		6,027,643		Small et al.	02/22/2000	
		5,914,025		Small	06/22/1999	
		5,597,734		Small et al.	01/28/1997	
		5,569,365		Rabin et al.	10/29/1996	

8	5,352,360	Stillian et al.	10/04/1994
	5,316,630	Dasgupta	05/31/1994
	5,248,426	Stillian et al.	09/28/1993
	4,999,098	Pohl et al.	03/12/1991
	4,455,233	Pohl et al.	06/19/1984
	4,314,823	Rich, Jr. et al.	02/09/1982
	4,265,634	Pohl	05/05/1981
	4,242,097	Rich, Jr. et al.	12/30/1980
8	5,773,615	Small et al.	06/30/1998

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. ¹	U.S. Patent Document			Name of Patentee or Applicant of cited document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind code ⁵ (if known)				
8		EP	0 536 930	A1	Apffel et al.	04/14/1993		
		EP	0 510 510	A2	Carlo Erba Strumentazione S.p.A.	10/28/1992		
		EP	0 417 976	A2	Eisai Co., Ltd.	03/20/1991		
		EP	0 343 972	A2	Hewlett-Packard Company	11/29/1989		
		EP	0 342 884	A1	Hewlett-Packard Company	11/23/1989		
		EP	0 338 572	A1	Hitachi, Ltd.	10/25/1989		
		EP	0 259 796	A3	Sepragen Corporation	03/16/1988		
		EP	0 152 747	A2	American Cyanamid Company	08/28/1985		
		EP	0 510 510	A3	Carlo Erba Strumentazione S.p.A.	10/28/1992		
		EP	0 417 976	A3	Eisai Co., Ltd.	03/20/1991		
		EP	0 259 796	A2	Sepragen Corporation	03/16/1988		
		EP	0 338 572	B1	Hitachi, Ltd.	10/25/1989		
		EP	0 898 167	A1	Dionex Corporation	02/24/1999		
		EP	0 555 962	A2	Dionex Corporation	08/18/1993		
		EP	0 180 321	B1	Dionex Corporation	05/07/1986		
		EP	0 133 782	A1	Dionex Corporation	03/06/1985		
		EP	0 133 781	A1	Dionex Corporation	03/06/1985		
		EP	0 646 239	B1	Dionex Corporation	04/05/1995		
		EP	0 555 962	A3	Dionex Corporation	08/18/1993		
		EP	0 898 167	B1	Dionex Corporation	02/24/1999		
		EP	0 758 449	B1	Dionex Corporation	02/19/1997		
		EP	0 671 002	B1	Dionex Corporation	09/13/1995		
		WO	01/80283	A1	Waters Investments Limited	10/25/2001		
		WO	01/67091	A1	Dionex Corporation	09/13/2001		
		WO	01/67090	A1	Dionex Corporation	09/13/2001		
		WO	00/42426	A1	Dionex Corporation	07/20/2000		
		WO	99/44054	A1	Dionex Corporation	09/02/1999		
		WO	99/11351	A1	Dionex Corporation	03/11/1999		
	WO	98/30314	A1	Dionex Corporation	07/16/1998			

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), Publisher, city, and/or country where published.	T ²
8		KAISER, Edward, Rohrer, Jeffrey S. and Watanabe, Kazuo, Determination of Trace Anions in Concentrated Weak Acids by Ion Chromatography, Journal of Chromatography A, 850, 1999, pp. 167-176, Elsevier Science, Amsterdam.	
		VANDERFORD, Griselda, Determination of Trace Anions in Hydrofluoric Acid by Ion Chromatography, 602, 1992, pp. 75-78, Elsevier Science, Amsterdam.	✓
		MURAYAMA, Mitsunori, Suzuki, Masao and Takitani, Shoji, Determination of Trace Anionic Impurities in Concentrated Inorganic Acids by Recycle Ion Chromatography, 466, 1989, pp. 355-363, Elsevier Science, Amsterdam.	
		MOHSIN, Sheher Bano, Use of Ion Chromatography – electrospray mass spectrometry for the Determination of Ionic Compounds in Agricultural Chemicals, Journal of Chromatography A, 884, 2000, pp. 23-30, Elsevier Science, Amsterdam.	✓
		AHRER, Werner and Buchberger, Wolfgang, Analysis of Low-Molecular-Mass Inorganic and Organic Anions by Ion Chromatography-Atmospheric Pressure Ionization Mass Spectrometry, Journal of Chromatography A, 854, 1999, pp. 275-287, Elsevier Science, Amsterdam.	
		BUCHBERGER, Wolfgang and Ahrer, Werner, Combination of Suppressed and Non-Suppressed Ion Chromatography with Atmospheric Pressure Ionization Mass Spectrometry for the Determination of Anions, Journal of Chromatography A, 850, 1999, pp. 99-106, Elsevier Science, Amsterdam.	✓
		CHARLES, L., and Pepin, D., Analysis of Oxyhalides in Water by Ion Chromatography-Ionspray Mass Spectrometry, Journal of Chromatography A, 804, 1998, pp. 105-111, Elsevier Science, Amsterdam.	✓
		ALEXANDER, James N., Quinn, Chad J., Organic Acid Analysis by Ion Chromatography-Particle Beam Mass Spectrometry, Journal of Chromatography, 647, 1993, pp. 95-100, Elsevier Science, Amsterdam.	
		SEUBERT, A., Schminke, G., Nowak, M., Ahrer, W. and Buchberger, W., Comparison of On-Line Coupling of Ion-Chromatography with Atmospheric Pressure Ionization Mass Spectrometry and with Inductively Coupled Plasma mass Spectrometry as Tools for the Ultra-Trace Analysis of Bromate in Surface Water Samples, Journal of Chromatography A, 884, 2000, pp. 191-199, Elsevier Science, Amsterdam.	
		BUCHBERGER, Wolfgang and Haider, Karl, Studies on the Combination of Ion Chromatography-Particle-Beam Mass Spectrometry with Capillary Columns, Journal of Chromatography A, 770, 1997, pp. 59-68, Elsevier Science, Amsterdam.	✓
		VILLASENOR, Steven R., "Heart-Cut" Column Switching Techniques for the Determination of an Aliphatic Amine in an Organic Matrix and for Low Levels of Sulfate in an Anion Matrix, Journal of Chromatography A, 671, 1994, pp. 11-14, Elsevier Science, Amsterdam.	✓
		WEIR, S.I., Butler, E.C.V., Haddad, P.R., Ion Chromatography with UV Detection for the Determination of Thiosulfate and Polythionates in Saline Waters, Journal of Chromatography A, 671, 1994, pp. 197-203, Elsevier Science, Amsterdam.	
		KILLGORE, Kendall J., and Villaseñor, Steven R., Systematic Approach to Generic Matrix Elimination via "heart-cut" Column-Switching Techniques, Journal of Chromatography A, 739, 1996, pp. 43-48, Elsevier Science, Amsterdam.	✓
V		MEDINA, Hilda Ledo de, Gutierrez, Elizabeth, Colina de Vargas, Marinela, Gonzalez, Graciela, Marin, Julio and Andueza, Eduardo, Determination of Phosphate and Sulphite in Natural Waters in the Presence of High Sulphate Concentrations by Ion Chromatography Under Isocratic Conditions, Journal of Chromatography A, 739, 1996, pp. 207-215, Elsevier Science, Amsterdam.	✓
8		HUANG, Yuan, Mou, Shi-Fen, Liu, Ke-Na and Riviolo, J.M., Simplifies Column-Switching Technology for the Determination of Traces of Anions in the Presence of High Concentrations of	✓

8		Other Anions, Journal of Chromatography A, 884, 2000, pp. 53-59, Elsevier Science, Amsterdam.	
		GJERDE, D.T., Cox, D.J., Jandik, P. and Li, J.B., Determination of Analytes at Extreme Concentration Ratios by Gradient Ion Chromatography with Solid-Phase Reaction Detection, Journal of Chromatography, 546, 1991, pp. 151-158, Elsevier Science, Amsterdam.	/
		SINGH, Raj P., Abbas, Nureddin, M. and Smesko, Sally A., Suppressed Ion Chromatographic Analysis of Anions in Environmental Waters Containing High Salt Concentrations, Journal of Chromatography A, 733; 1996, pp. 73-91, Elsevier Science, Amsterdam.	/
		NOVIC, Milko, Kivjak, Blaz and Pihlar, Boris, On-Column Processes in Ion Chromatographic Determination of Nitrite and Nitrate in Heavy Mineralised Samples, Journal of Chromatography A, 827, 1998, pp. 83-89, Elsevier Science, Amsterdam.	
		KAISER, Edward, Rohrer, Jeffrey S. and Jensen, Detlef, Determination of Trace Anions in High-Nitrate Matrices by Ion Chromatography, Journal of Chromatography A, 920, 2001, pp. 127-133, Elsevier Science, Amsterdam.	
		SIRIRAKS, Archava, Pohl, Christopher A. and Toofan, Mahmood, Determination of Trace Anions in Concentrated Acids by Means of a Moderate-Capacity Anion-Exchange Column, Journal of Chromatography, 602, 1992, pp. 89-95, Elsevier Science, Amsterdam.	
		CHARLES, L., Pepin, D and Casetta, B., Electrospray Ion Chromatography-Tandem mass Spectrometry of Bromate at Sub-ppb Levels in Water, Analytical Chemistry, August 1, 1996, pp. 2554-2558, Vol. 68, No. 15.	/
		CHARLES, L., and Pepin, D., Electrospray Ion Chromatography-Tandem Mass Spectrometry of Oxyhalides at Sub-ppb Levels, Analytical Chemistry, January 15, 1998, pp. 353-359, Vol. 70, No. 2.	
		MOHSIN, Sheher Bano, Ion Chromatography Coupled with Mass Spectrometry for the Determination of Ionic Compunds in Agricultrual Chemicals, Analytical Chemistry, August 15, 1999, pp. 3603-3609, Vol. 71, No. 16.	
		LACOURSE, William R., Column Liquid Chromatography: Equipment and Instrumentation, Analytical Chemistry, June 15, 2000, pp. 37R-51R, Vol. 72, No. 12.	/
		BURLINGAME, A.L., Boyd, Robert K. and Gaskell, Simon J., Mass Spectrometry, Analytical Chemistry, June 15, 1996, pp. 599R-651R, Vol. 68, No. 12.	
		WILLOUGHBY, Ross, Sheehan, Edward and Mitrovich, Samuel, A Global View of LC/MS: How to Solve Your Most Challenging Analytical Problems, Global View Publishing, Pittsburgh, Pennsylvania..	
		ROEDER, V. and Jardy, A., Determination of Inorganic Contaminants in Concentrated Reagents by Ion Chromatography, Analusia, March 1996, pp. 43-48, Elsevier, Paris, France.	
8	/	Buldini, Pier Luigi, Sharma, Jawahar Lal and Sarma, Shikha, Determination of Tace Amounts of Anionic Imputities in Hydrochloric Acid by Ion Chromatography, The Analyst, January 1994, pp. 121-124,	

Examiner
Signature

Date
Considered

3/18/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent & Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.